

Claims

1. A chair with reclining mechanism comprising:
a sitting base (3) supported by a plurality of legs (4)
5 wherein said base (3) and legs are collectively referred to
herein as the "rigid members" of the chair;
a backrest (1) with one end pivotally connected to at least
one rigid member; and
at least one reclining means (2) connecting said backrest to
10 said rigid member; wherein said reclining means (2) allows
backrest to adaptably recline according to pressure exerted by
a user, and to revert to original position upon removal of
said pressure characterised in that said reclining means (2)
15 comprises a non-torsional spring-bias element, said element is
arranged to be compressible in any position except along a
substantially vertical direction.
2. A chair according to claim 1, wherein said reclining means
includes at least one of a piece of elastic material capable
20 of returning to its original form when the reclining force
which is applied to the backrest is removed; and components or
parts that can be extended or compressed when a reclining
force is applied to it by the backrest and is biased to return
to pre-stressed form upon said force is removed.
- 25 3. A chair according to claim 2, wherein the reclining means'
material includes elastic polymers, including rubber and
plastics.
- 30 4. A chair according to claim 2 wherein the components
includes any one of
a non-torsional spring-bias element including spring plate,
metal plate that is shaped to perform like a spring plate or
leaflet spring, and

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compressible and/or extensible element including pneumatic- or spring-biased telescopic element.

5. A chair according to any one of claim 1 to 4, wherein said reclining means is provided in any one of the following dispositions - part or wholly exposed, completely hidden, embedded within the backrest, hidden within hollow cutouts, inside of the said backrest.
6. A chair according to any one of the preceding claims, wherein said backrest enables user to recline thereon within a range of reclining angles allowable by the reclining means used.
7. A chair according to claim 6, wherein the said backrest extends to form hind legs of said chair and comprises two portions whereby the top portion has a freedom of rotation with respect to the said rigid members; and the bottom portion is connected to said rigid members as well as to said top portion by any joint means, wherein said bottom portion serve as legs; and with a reclining mean is incorporated in between said portions of the said backrest.
8. A chair according to claim 7, wherein the said reclining means is incorporated in the joint between the top and bottom portions of said backrest, wherein said reclining means comprises elastic means to absorb compression force due to said reclining movement and which will return to its original uncompressed form upon said compression force is removed.
9. A chair according to claim 7, wherein said reclining means is incorporated in the joint between the top and bottom portions of said backrest, and wherein said reclining means

comprises at least a metal spring plate that may be biased to bend due to reclining pressure and reverts back to its pre-stressed position upon said reclining force is removed.

5 10. A chair according to claim 7, wherein the said reclining means is incorporated in the joint between the top and bottom portions of said backrest, and wherein said reclining means a coil spring that is biased upon allowing the top portion of the said backrest to pivotally rotate about said joint with
10 said bottom portion upon receiving reclining force and said bias returns said backrest to return its pre-stressed position upon the reclining force is removed.

11. A chair according to claim 8, wherein the said reclining
15 means uses—elastics means, including elastic material and/or non-torsional spring-biased element disposed hidden inside the backrest (13).

12. A Chair according to claim 8, wherein said reclining means
20 uses elastic means, including elastic material and/or non-torsional spring-biased element that is housed externally (9).

13. A chair according to claim 8, wherein said reclining means
25 comprises a metal plate hidden inside the said backrest.

14. A chair according to claim 10, wherein said reclining means comprises a coil spring hidden inside said backrest.

15 A chair according to any of claim 7 to 14, wherein the
30 backrest comprises two portions that are securely joined together by a supporting means which includes a metal rod inserted inside said backrest and hinged in between said two portions of the said backrest, and wherein said supporting

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means is capable of withstanding repeated cycles of reclining movements.

5 16. A chair according to any of claim 1 to 15, wherein said sitting base and backrest includes any one or combination of padded, upholstered or bare material.

10 17. A chair according to any preceding claims, wherein the legs are provided at an appropriate length and affixed at an appropriate angle from the normal of the said sitting base.

15 18. A chair according to any of claim 1 to 15, wherein the connection means for holding members comprising the chair includes nuts and bolts assemblies, fasteners, screws, snaps, clamps, clips and the like fastening means.

19. A chair according to any preceding claims, the chair is incorporated with at least one supporting surface for resting of limbs.